

m/027/007



Western States Minerals Corp.

250 South Rock Blvd. Suite 118
Reno, Nevada 89502

January 9, 2001

Mr. D. Wayne Hedberg
Permit Supervisor
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Re: **FINAL RECLAMATION AND CLOSURE REPORT for the
Drum Mine, Millard County, Utah**

Dear Wayne:

As Western States Minerals Corp. has completed the reclamation and closure of the Drum Mine site, I have written a final report detailing what was done to achieve the final product. The report is attached. I have sent one copy to you and one copy to Rex Rowley of the BLM. If you require more copies or you believe it is necessary to send a copy to other agencies or persons please let me know. My E-mail address is jwa@wsmcgold.com or you may call me at (775) 856-3339 ext. 11.

In your letter, dated December 20, 2000, to E. M. Buzz Gerick, you requested WSMC to present to UDOGM, options for a more thorough closure of the adits in the bottom of the SW/EX pit, and also an assessment of the work performed to date to close those adits. It needs to be noted that these adits were the sole creation of the Jumbo Mining Company and not WSMC. These requests are addressed as follows:

As there is no material left in the bottom of the SWEX pit with which to fill the open adits and safe access for heavy equipment is limited, the option of trying to close the adits using the method already implemented is no longer viable. Two possible alternative methods for closure are: 1) directional paste blasting where-by explosive is attached to the overhang and back of the adits in an attempt to blast enough material from the back, which would block the opening, or 2) angle drilling from the top edge of the pit toward the overhang and adit after which deck blasting would be implemented in an attempt to once again blast enough material from the adit back and overhang to close the openings. Estimates from a blasting and drilling contractor will be solicited and presented to you when available.

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DIVISION OF
OIL, GAS AND MINING

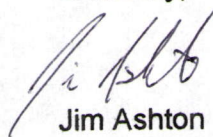
WSMC has spent \$10,040 to date closing the adits in the bottom of the pit. The work is as follows:

WSMC'S ADIT CLOSURE EXPENDITURES				
Equipment	Description	Time, hrs	Cost, \$/hr	Total Cost
Excavator	Fill adits along ramp	18	90	\$1,620
D6 Dozer	Rancho – adit bottom pit	Lump Sum	-	\$1,000
D9N Dozer	Fill adit bottom of pit	9	195	\$1,755
Excavator	Push material from top of pit	9	90	\$0,810
D9N Dozer	Push material from top of pit	9	195	\$1,755
NA	Insurance, Contract Administration & Proj. Management	NA	Lump Sum	\$3,100
TOTAL				\$10,040

WSMC believes that the scope of work involved in closing the adits, agreed upon by both WSMC and the Agencies, was to use available WSMC equipment and the existing material in the bottom of the pit to plug the adit openings. This has been done. The alternative methods of closure, that UDOGM are currently requesting, are beyond the original scope of work.

If you need any further information please give Buzz Gerick or myself a call and we will be pleased to help. Please Thank Doug Jensen for the use of the photographs.

Sincerely,



Jim Ashton
Senior Project Engineer

Cc: Rex Rowley, BLM Field Office Manager
John Carmody, WSMC

m/027/007

FINAL REPORT
DETAILING THE
RECLAMATION AND CLOSURE
OF THE
DRUM MINE
MILLARD COUNTY, UTAH

November 2000

Prepared for
United States Department of the Interior, Bureau of Land Management
State of Utah, Department of Natural Resources, Division of Oil, Gas and Mining
Utah Department of Environmental Quality, Division of Water Quality

Prepared by
Western States Minerals Corporation
250 S. Rock Boulevard, Suite 118
Reno, Nevada 89402

SCOPE OF REPORT:

This report will detail the work Western States Minerals Corporation (WSMC) performed and completed as specified in the "Reclamation and Closure Plan for the Drum Mine, Millard County, Utah" dated November 19, 1999 and approved by all agencies (Bureau of Land Management, Utah Division of Oil, Gas and Mining and Utah Department of Environmental Quality, Division of Water Quality) concerned.

INTRODUCTION:

The Drum Mine was a conventional open pit and heap leach facility, which WSMC operated between 1984 and 1987. Jumbo Mining Company (Jumbo) took control of the site after WSMC. Mine waste components generated at the site during mining activity included two low-grade (LG2 and LG3) and six high-grade (HG1 through HG7) heap leach pads. Low-grade heap LG1 was never leached and is thus considered a waste rock dump and high-grade heaps HG4 and HG5 are combined and considered as one heap. Six waste rock dumps (W1 - W4, W7 and LG1), in addition to two open pits and ancillary facilities (e.g., offices, maintenance and process facilities and process ponds) were also left in-place after mining ceased. Photo #1 shows an aerial photo of the site taken in July 1987.

After much negotiating and compromises, WSMC along with the agencies agreed to a characterization and sampling plan, a reclamation and closure plan and procedures to implement the two plans. Reclamation of the site was initiated on June 5, 2000 and completed on November 28, 2000. On November 28, 2000, during a site visit by both UDOGM and the BLM, WSMC's representative was told that reclamation at the site was completed. Three maps have been included at the back of this report: 1) Map #1 - Original Topography prior to mining, 2) Map #2 - Beginning Reclamation Surface, Topography for Photo #1, and 3) Map #3 - Final or Current Topography.

SITE CHARACTERIZATION:

In November 1997, a "Characterization Sampling Program for Heap Leach Pads and Waste Rock Dumps" for the Drum Mine was submitted to the agencies for approval. The program proposed collecting multiple representative samples from the various heaps and rock dumps. The intent of this program was to analyze the samples and provide characterization and analytical information necessary for the determination of the following:

- ◆ A formal closure and reclamation plan for the waste components.
- ◆ The current status of component stabilization.
- ◆ What additional or alternative stabilization efforts may be needed or considered, if any.

The characterization and sampling plan was approved in March 1998. The sampling of the waste components at the Drum Mine was completed in May 1998. Samples were taken to McClelland Laboratories located in Sparks, Nevada. Soil samples were also collected with the help of UDOGM and delivered to Utah State University Analytical labs for fertilizer recommendations. Both the solution and the sediment in the two remaining process ponds were also sampled. All analytical results were finally received by October 1998. The following analytical procedures were performed on all samples except the soil samples.

PHOTO #1 – DRUM MINE AS OF JULY 1987



- ◆ Nevada Department of Environmental Protection Meteoric Water Mobility Test.
- ◆ Acid Generation/Acid Neutralization Potential.
- ◆ EPA Profile II solution analysis.
- ◆ Wad Cyanide and Paste pH.
- ◆ Permeability and Moisture Content.

All results indicated and confirmed that the site is benign and does not pose a threat to the waters of the state.

RECLAMATION AND CLOSURE PLAN:

A Reclamation and Closure Plan for the Drum Mine was submitted to the agencies in December 1998. After all comments had been received and all negotiating completed, a final document was submitted in November 1999.

Within the reclamation plan the following items were addressed:

- ◆ Post Mining Land Use
- ◆ Reclamation Procedures
- ◆ Decommissioning of Facilities
- ◆ Drainage and Erosion Control
- ◆ Site Characterization
- ◆ Demonstration of Non-degradation of State Waters
- ◆ Reclamation of the Site
- ◆ Reclamation Monitoring

Also within the Reclamation Plan, a cost estimate for completing the reclamation and closure was also developed. As responsibility for the site is divided between WSMC and the agencies, the cost estimate took this into account and broke out the costs accordingly.

FIRST AMENDED AGREEMENT:

Due to the unique history of the project, responsibility for reclamation ultimately was divided between WSMC and the agencies due to a bond forfeiture by another involved party, Jumbo. In the interest of expediting the whole process, WSMC and the agencies negotiated a revised division of responsibilities among themselves designed to make reclamation of the site more cost effective, efficient and beneficial for the environment. Within the agreement, WSMC performed all obligations specified in the reclamation plan and acted as a General Contractor to complete not only their part, but also the part that the agencies were responsible for. The agreement outlined compensation to WSMC for completing the agencies part of the project, and release of WSMC's performance bond.

SITE RECLAMATION AND CLOSURE:

In late May 2000, WSMC transported a fuel truck and one of their D9N dozers to the Drum Mine site. On June 5, 2000 WSMC began sloping the heaps and waste rock dumps. WSMC's second D9N dozer was disabled in an accident during transport to the site. A leased dozer was sent within the same week and began sloping on June 11th. Heaps and waste rock dumps were re-contoured to a nominal slope of 2.5H : 1V.

Most of the remaining facilities were removed by successful auction bidders and local residents. These facilities included the process building, all power poles, all of the large used truck and loader tires and all useable tanks. Those facilities that were remaining, i.e. concrete foundations, iron structures from the process building, and all other benign garbage were placed in the barren pond landfill. A Class III Landfill was granted to WSMC by the Utah Division of Solid and Hazardous Waste on August 22, 2000.

Hazardous items of concern at the site were disposed of in a safe manner and followed all applicable state regulations. The items of concern which were disposed included old vehicle batteries (taken to A-1 Recycling in Reno, Nevada), used oil (Transported to WSMC's used oil tank located at their Northumberland Project near Kingston, Nevada), and the Calcium Chloride (taken by Millard County Road Department). No other hazardous items were found at the site.

Rancho Equipment Services (Rancho), located in Delta, Utah, was the selected sub-contractor for the project. Rancho provided equipment and manpower necessary to excavate, transport and place growth media over the re-contoured site. As a final procedure for reclamation on the site, the entire site was lightly ripped (approximately one foot deep) along contour. The ripping phase took about two weeks to complete and provided an excellent seedbed, an inhibitor to erosion and roughened the surface, which blended it into the surrounding countryside. Rancho also helped with the filling and contouring of the barren pond landfill. Three 631 scrapers, one D6 dozer and one 140G grader were used by Rancho to accomplish these tasks. Rancho began work on September 5, 2000 and completed the tasks on November 10, 2000. Table #1 lists the area for each component at the site, which required growth media. Table #2 is a detailed tabulation of Rancho's progress through the job showing area where they were working and load counts. As is seen in the tabulation, Rancho placed an average of 0.54 feet of growth media over the site (159 acres), along with 504 tons of manure or an average of 3.17 tons manure/acre.

On November 14, 2000, with clear skies and very light winds, Spanish Fork Flying Service aerial spread the approved seed mix (Table #3). A total of 4,350 pounds of seed (bulk) were spread over the site, which is equivalent to 3,150 pounds of pure live seed. The area requiring seed is shown on Map #3, Current Topography, and encompasses an area of roughly 187 acres excluding the two pits. As the seed was dropped relatively high up, the total area covered is estimated at 220 acres which equates to 14.3 pounds pure live seed per acre. Additional seed was hand spread over all areas disturbed after the aerial seeding took place.

WSMC personnel completed the site reclamation by ripping the remaining roads and re-establishing the perimeter fence that was temporarily removed during reclamation. UDOGM inspected the site on November 22, along with WSMC personnel, and requested that several slopes be ripped again along contour. This was completed on November 27 by Rancho using their D6 dozer. UDOGM along with a

TABLE #1 - DRUM MINE SITE RECLAMATION COMPONENTS

AREA	ACREAGE	VOLUME (LCY)
HG1	8.6	6,940
HG2	8.8	7,100
HG3	8.1	6,530
HG4&5	17.8	14,360
HG6	3.3	2,660
HG7	9.4	7,580
LG1	3.5	2,820
LG2	7.9	6,370
LG3	7.4	5,970
W1	20.1	16,220
W2	14.9	12,020
W3	5.9	4,760
W4	3.5	2,830
W7	13.4	10,810
HG1-RAMP	2.9	2,340
HG6-RAMP	1.7	1,370
LG2-WASTE	10	8,070
LG3-WASTE	5.3	4,280
POND/FACILITIES	3.2	2,580
OTHER - ROADS	3.5	2,830
TOTAL	159.2	128,440

NOTE:

Growth media borrow areas used are shown on Map #2
(Beginning Surface prior to reclamation)

**TABLE #2 - GROWTH MEDIA PLACEMENT REPORT
RANCHO EQUIPMENT SERVICES**

DATE	WORK AREA	NUMBER LOADS	AREA COVERED ACRES	CUMM YDS*	CUMM AREA ACRES	AVE DEPTH FEET/AC	MANURE DELIVERED TONS
9/5/00	HG1 & HG2	171	5	4275	5	0.53	19.5
9/6/00	HG1 & HG2	212	7	9575	12	0.49	54.7
9/7/00	HG1 & LG3	132	4	12875	16	0.50	73.8
9/8/00	HG3 & LG3	165	5	17000	21	0.50	99
9/9/00	HG3, HG6 & HG4&5	206	6	22150	27	0.51	
9/11/00	HG2 & HG4&5	159	5	26125	32	0.51	
9/12/00	W3, HG4&5	134	4	29475	36	0.51	
9/13/00	W3, LG3, HG4&5	175	6	33850	42	0.50	
9/14/00	LG3, HG4&5	147	4	37525	46	0.51	46.3
9/15/00	LG3, HG4&5	138	4	40975	50	0.51	
9/18/00	HG7	165	5	45100	55	0.51	
9/19/00	HG7, W7	135	3	48475	58	0.52	22.4
9/20/00	HG7, W7	154	4	52325	62	0.52	
9/21/00	W7, W4	163	6	56400	68	0.51	
9/22/00	W7, LG2	147	5	60075	73	0.51	
9/25/00	LG2	121	3	63100	76	0.51	45.4
9/26/00	LG3, LG2	141	5	66625	81	0.51	
9/27/00	LG2, W4	145	3	70250	84	0.52	
9/29/00	LG2, W7	191	6	75025	90	0.52	
9/30/00	W7, LG3, ROADS	189	5	79750	95	0.52	
10/2/00	HG4&5	156	4	83650	99	0.52	52.3
10/3/00	HG4&5, ROADS	200	5	88650	104	0.53	90.7
10/4/00	HG3, HG6, ROADS	203	5	93725	109	0.53	
10/5/00	W2, ROADS	172	4	98025	113	0.54	
10/6/00	W2, ROADS	202	8	103075	121	0.53	
10/9/00	W2, ROADS	196	6	107975	127	0.53	
10/10/00	W2, W1	233	7	113800	134	0.53	
10/11/00	W1	142	4	117350	138	0.53	
10/16/00	W1	187	6	122025	144	0.53	
10/17/00	W1, LG1	214	4	127375	148	0.53	
10/18/00	W1,	214	5	132725	153	0.54	
10/19/00	W1, LG1	197	6	137650	159	0.54	
TOTALS		5506	159				504.1

NOTE:

* - One load for a 631 scraper was estimated to contain 25 cubic yards of material.

TABLE #3
DRUM MINE SITE REVEGETATION SEED MIXTURE
(Provided by Plummer Seed Co.)

Species	Variety	PLS lb./acre	Bulk lb./acre	% Pure Seed	% Total Germ.	Origin	Tested
Fourwing Saltbush	Native	2.00	5.00	26.81	42.00	UT	2-00
Indian Ricegrass	Nezpar	2.75	2.90	16.36	95.00	WA	8-00
Crested Wheatgrass	Hycrest	2.00	2.34	12.65	89.00	Canada	11-00
Pubescent Wheatgrass	Luna	2.00	2.17	11.73	96.00	WA	7-99
Western Wheatgrass	Arriba	1.25	1.45	7.83	90.00	WA	6-00
Alfalfa	Ladak	1.00	1.04	5.87	96.00	MT	5-00
Western Wheatgrass	Rosanna	0.75	0.84	4.45	95.00	WA	3-00
Forage Kochia	Immigrant	0.50	0.62	3.06	92.00	UT	11-00
Yellow Sweet Clover		0.50	0.54	3.03	93.00	Canada	4-99
Wyoming Big Sagebrush	Native	0.10	0.86	0.65	87.00	UT	9-00
TOTALS		12.85	17.76				

% WEED SEED = .05 % OTHER CROP = .05 % INERT MATTER = 7.46
NOXIOUS WEEDS = None Found

BLM representative visited the site once again on November 28 and approved the work. Photo Page #1 shows several panoramas of the site taken by Doug Jensen. The photos show how much the site has changed from the beginning of reclamation through to the conclusion.

ADDITIONAL AREAS RECLAIMED:

OLD EXPLORATION SITES:

Several exploration drilling sites were reclaimed around the periphery of the site. The sites were mainly small road cuts to allow the drill rig access. The exploration sites to be reclaimed were all inspected on February 17, 1999 during a mine visit with both BLM and DOGM personnel. The sites were reclaimed using WSMC's excavator and hand seeded using the approved seed mix. Any open drill holes found were plugged.

BUSBY SPRINGS:

The Busby Springs area is located approximately ¼ mile northeast of LG3. The area contained one drill hole and a small lined pond (probably for wildlife). The drill hole was plugged by filling it to within approximately 20 feet of the collar with drill cuttings. The remainder of the hole was filled with cement. All debris was removed and the small pond was backfilled. The excavator was used to remove a portion of the road leading to the spring, re-contour a small excavation near the entrance to the spring, and roughen the surrounding area prior to seeding.

MIZPAH AREA:

Located approximately one mile north of the Drum Mine site, the Mizpah area was an exploration target drilled in the mid to late 1980's. An estimated 175 exploration holes were drilled in the target area, which encompasses an area of approximately 90 acres. All drill holes were plugged and any large road cuts were re-contoured. During a site visit with the BLM on July 12, 2000, the areas requiring reclamation were determined. Most of the site has been naturally reclaimed and it was thus decided that more harm than good would be done if the areas were re-disturbed. WSMC's excavator performed the bulk of the reclamation work with the seeding and plugging of the drill holes by hand. During the site inspection of November 28th, The BLM stated they were satisfied with the work done.

ALTO PIT:

Spread over an area of approximately four acres, the Alto Pit is a small excavation mined by Jumbo. The area is located approximately 2.5 miles northwest of the Drum Mine. Reclamation of the site consisted of contouring the pit area, pulling in the berm along the haul road and finally ripping the haul road. A large berm was placed at the entrance to the effected area and the whole area was seeded with the approved seed mix. The reclamation for this area was determined to be satisfactory on a November 22nd visit by UDOGM.

Drum Mine

TIME SEQUENCE PANORAMAS



Before Reclamation



After Re-Grading



ALTO HAULROAD:

That portion of the Alto haulroad required to be reclaimed was approximately 1.5 miles long and is located north of the entrance to the Drum Mine and west of the Mizpah area. The road was a single lane dirt road approximately 12 feet wide. Reclamation consisted of pulling in the road berms where needed, minor contouring where needed and ripping. After the excavator and D9N dozer had completed their part, the whole area was hand seeded using the approved seed mix. The site was inspected by UDOGM on November 28th and approved.

WELLHEAD AND WATER TRANSFER SITES:

Water was supplied to the mine via an eight (8) mile long pipeline. The wellhead is located near Greener Reservoir southeast of the mine. The water was pumped 2 miles to a transfer pond west of the well where it was then pumped approximately 4 miles to a transfer tank and then onto the mine. The pipeline, tanks and pumps were salvaged. Debris remaining at the wellhead and the transfer tank areas was buried in place. Refuse remaining at the transfer pond area was placed in the pond where the liner was then folded over and buried. All sites were contoured where needed, ripped and hand seeded using the approved seed mix. Before (wellhead and transfer pond) and after (all three sites) photos are shown on Photo Pages #2 through #4.

SW/EX PIT ADITS:

A total of six (6) underground openings, all connected underground, were excavated by Jumbo near the bottom of the Southwest Extension Pit. WSMC agreed to close these adits by using available material nearby to backfill the entrances. To facilitate this project, both the excavator and D9N dozer pushed as much material as feasible into the pit from above the openings. The excavator then trammed down into the pit and using it's bucket, pushed material into the openings. The excavator was able to reasonably close five of the openings by this method. The largest of the openings however could not be closed in this manner due to safety and access concerns. Rancho using it's D6 dozer along with WSMC's D9N dozer pushed material from below the opening and from around the sides in an attempt to more thoroughly close this final opening. This tactic was successful in closing approximately 95 percent of the opening. However, with no material left nearby with which to complete the adit closure, other means of closing the opening will be required. Photo Page #5 shows the current status of the opening. During the initial site visit to inspect the pit adits, September 8, 1999, it appeared the work could be completed using WSMC's available equipment and the remaining loose material in the bottom of the pit. This was the specified scope of work and this was completed. Specifics to this closure problem are addresses in the cover letter.

PHOTO PAGE #2
WELLHEAD AREA – WATER SUPPLY LINE



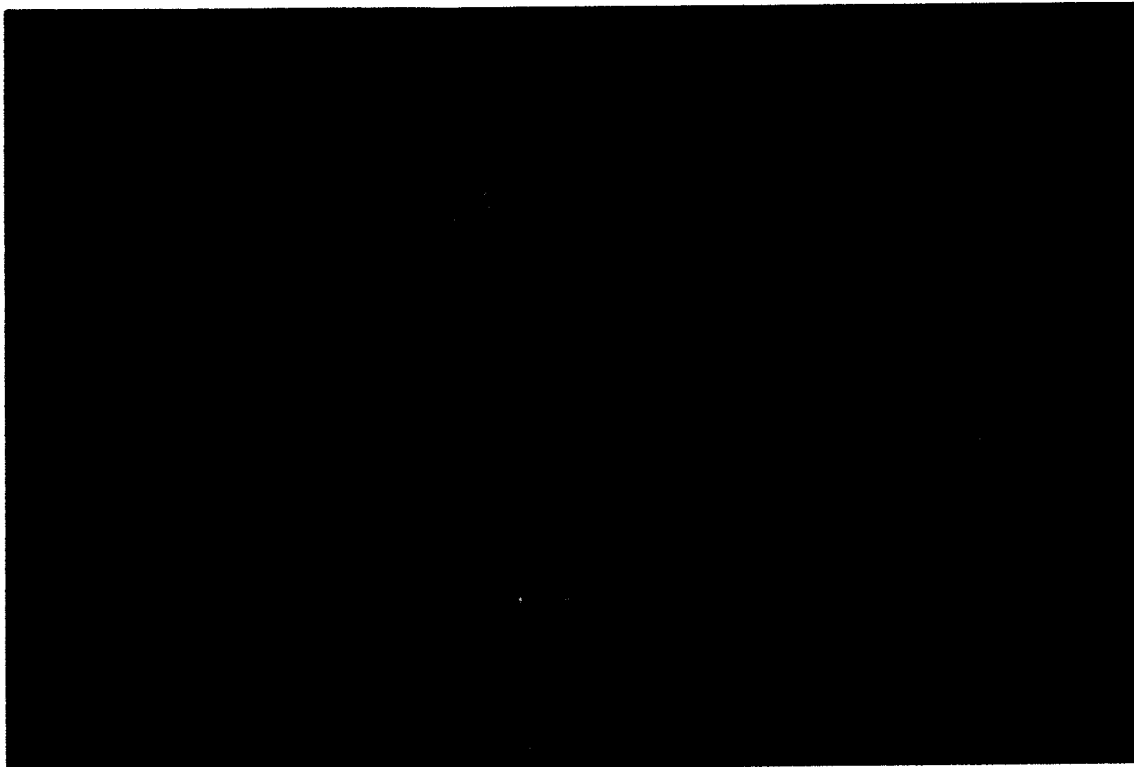
PHOTO PAGE #3
TRANSFER POND AREA – WATER SUPPLY LINE



PHOTO PAGE #4
TANK TRANSFER AREA – WATER SUPPLY LINE



PHOTO PAGE #5
REMAINING UNDERGROUND OPENING IN SW/EX PIT

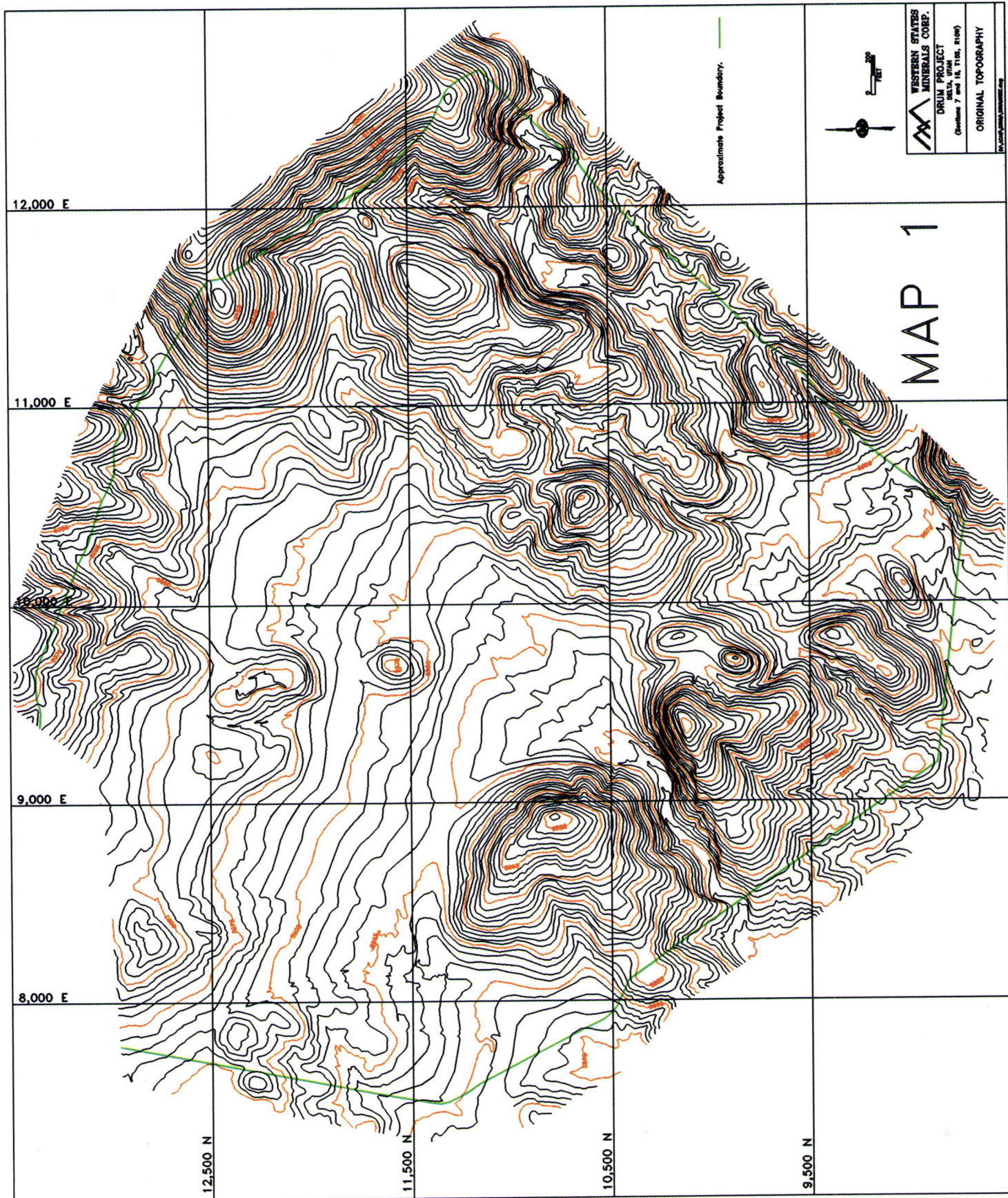


RECLAMATION OF NEARBY SITE:

An area approximately ¼ mile northwest from the Drum Mine consisting of old mine workings was reclaimed by WSMC at the request of the BLM. The area, before and after, is shown on Photo Page #6. Reclamation consisted of removing access roads, pulling berm material back off the slope, plugging a decline and re-contouring the area to blend in with the natural slope. The area was hand seeded using the same seed mix as for the Drum site. Reclamation of this site is outside the contract for the Drum Mine and was approved by the BLM on November 28, 2000.

PHOTO PAGE #6
RECLAMATION OF OLD MINE WORKINGS NEAR DRUM MINE





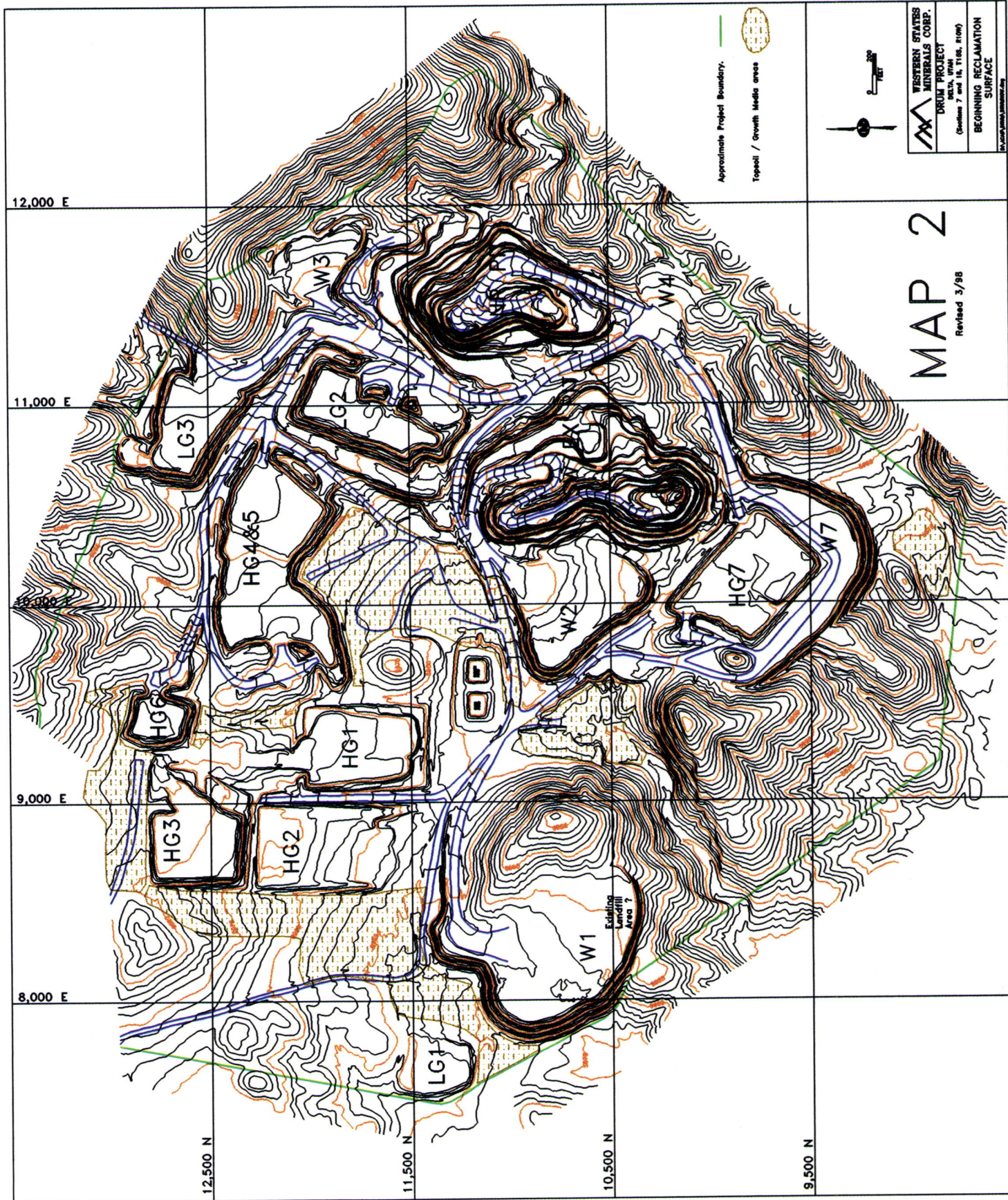
Approximate Project Boundary.

MAP 1



WESTERN STATES
MINERALS CORP.
ORION PROJECT
Section 7 and 18, T18S, R10W

ORIGINAL TOPOGRAPHY



WESTERN STATES
MINERALS CORP.
DEUT PROJECT
MEXICO, U.S.A.
(Sections 7 and 16, T16S, R10W)
BEGINNING RECLAMATION
SURFACE
BY JAMES W. LAMBERT, JR.

MAP 2

Revised 3/98

